**CLAIMS:**

1. A method comprising:

receiving a first signal having a first frequency and a second signal having a second frequency, the first and second frequencies being different from a frequency of an incoming RF signal;

generating at least one local oscillator signal having a frequency determined as a function of the first and second frequencies; and

generating at least one baseband signal as a function of the local oscillator signal and the RF signal.

2. The method of claim 1, wherein the frequency of the local oscillator signal is one of a sum and a difference of the first and second frequencies.

3. The method of claim 1, wherein generating the at least one local oscillator signal comprises generating an in-phase local oscillator signal and a quadrature local oscillator signal.

4. The method of claim 1, further comprising applying the local oscillator signal to convert the RF signal down to an in-phase baseband signal and a quadrature baseband signal.

5. The method of claim 1, further comprising generating a quadrature representation of at least one of the first and second signals.

6. A wireless communication device comprising:

a downconverter to generate at least one baseband signal as a function of an RF signal and of a local oscillator signal, the local oscillator signal having a frequency determined as a function of first and second frequencies different from a frequency of the RF signal; and

a modem to demodulate the at least one baseband signal.

7. The wireless communication device of claim 6, wherein the downconverter comprises a quadrature signal generator to generate in-phase and quadrature local oscillator signals having a frequency equal to one of a sum and a difference of the first and second frequencies.

8. The wireless communication device of claim 6, further comprising:

a first frequency oscillator external to the downconverter and configured to generate a first signal having the first frequency; and

a second frequency oscillator to generate a second signal having the second frequency.

9. The wireless communication device of claim 8, wherein the second frequency oscillator is integral with the downconverter.

10. A demodulator comprising:

a quadrature signal generator to generate in-phase and quadrature local oscillator signals having a frequency determined as a function of first and second frequencies different from a frequency of an incoming RF signal;

a first mixer to generate an in-phase baseband signal as a function of the in-phase local oscillator signal and the RF signal;

a second mixer to generate a quadrature baseband signal as a function of the quadrature local oscillator signal and the RF signal; and

a modem to demodulate the in-phase and quadrature baseband signals.

11. The demodulator of claim 10, wherein the frequency of the in-phase and quadrature local oscillator signals is one of a sum and a difference of the first and second frequencies.

12. The demodulator of claim 10, further comprising:

a first frequency oscillator to generate a first signal having the first frequency; and

a second frequency oscillator to generate a second signal having the second frequency.

13. An integrated circuit comprising:

a quadrature signal generator to generate in-phase and quadrature local oscillator signals having a frequency determined as a function of first and second signals having first and second frequencies different from a frequency of an RF signal;

a downconverter to generate in-phase and quadrature baseband signals as a function of the RF signal and of the in-phase and quadrature local oscillator signals; and

a modem to demodulate the in-phase and quadrature baseband signals.

14. The integrated circuit of claim 13, wherein the frequency of the local oscillator signals is one of a sum and a difference of the first and second frequencies.

15. The integrated circuit of claim 13, further comprising a phase shifter to generate a quadrature representation of at least one of the first and second signals.

16. The integrated circuit of claim 13, wherein the quadrature signal generator is coupled to receive the first signal from a first frequency oscillator external to the integrated circuit and to receive the second signal from a second frequency oscillator.

17. The integrated circuit of claim 16, wherein the second frequency oscillator is integral with the integrated circuit.

18. A processor readable medium containing processor executable instructions for:

receiving a first signal having a first frequency and a second signal having a second frequency, the first and second frequencies different from a frequency of an RF signal;

generating at least one local oscillator signal having a frequency determined as a function of the first and second frequencies; and

generating at least one baseband signal as a function of the at least one local oscillator signal and the RF signal.

19. The processor readable medium of claim 18, wherein the frequency of the local oscillator signal is one of a sum and a difference of the first and second frequencies.

20. The processor readable medium of claim 18, further containing processor executable instructions for generating an in-phase local oscillator signal and a quadrature local oscillator signal.

21. The processor readable medium of claim 18, further containing processor executable instructions for applying the at least one local oscillator signal to convert the RF signal down to an in-phase baseband signal and a quadrature baseband signal.

22. The processor readable medium of claim 18, further containing processor executable instructions for generating a quadrature representation of at least one of the first and second signals.

23. A wireless communication device comprising:

a downconverter configured to

receive a first signal having a first frequency and a second signal having a second frequency, the first and second frequencies different from a frequency of an RF signal,

generate at least one local oscillator signal having a frequency determined as a function of the first and second frequencies, and

generate at least one baseband signal as a function of the at least one local oscillator signal and the RF signal; and

a modem to demodulate the at least one baseband signal.

24. The wireless communication device of claim 23, wherein the frequency of the local oscillator signal is one of a sum and a difference of the first and second frequencies.

25. The wireless communication device of claim 23, wherein the downconverter is configured to generate an in-phase local oscillator signal and a quadrature local oscillator signal.

26. The wireless communication device of claim 23, wherein the downconverter is configured to apply the at least one local oscillator signal to convert the RF signal down to an in-phase baseband signal and a quadrature baseband signal.

27. The wireless communication device of claim 23, wherein the downconverter is configured to generate a quadrature representation of at least one of the first and second signals.

28. An apparatus comprising:

means for receiving a first signal having a first frequency and a second signal having a second frequency, the first and second frequencies different from a frequency of an RF signal;

means for generating at least one local oscillator signal having a frequency determined as a function of the first and second frequencies; and

means for generating at least one baseband signal as a function of the at least one local oscillator signal and the RF signal.

29. The apparatus of claim 28, wherein the frequency of the local oscillator signal is one of a sum and a difference of the first and second frequencies.

30. The apparatus of claim 28, further comprising means for generating an in-phase local oscillator signal and a quadrature local oscillator signal.

31. The apparatus of claim 28, further comprising means for applying the at least one local oscillator signal to convert the RF signal down to an in-phase baseband signal and a quadrature baseband signal.

32. The apparatus of claim 28, further comprising means for generating a quadrature representation of at least one of the first and second signals.